

Installation Instructions

Bottom Lifting Practice Cage by Draper

Caution

- ① Locate and identify all parts using the hardware list and the drawings. "As built" drawings and hardware list are packed in hardware carton. Do not discard with packing material.
 - ② Key switch is packed in winch crate, do not discard.
 - ③ Operates on 110-120v, 60 Hz current (unless noted otherwise).
 - ④ Wiring diagram can be found inside winch limit cover panel.
 - ⑤ Instructions for attaching and wiring winch are packed in winch carton.
- NOTE:** Winch has been tested at the factory and found to be operating correctly prior to shipment.

These instructions are meant as a guide only. They do not bind Draper, Inc. in any way and do not imply any responsibility of Draper, Inc. for improper installation or faulty workmanship at the jobsite.

Hardware Installation

- ① Verify overall height and width with shop drawing to determine possible discrepancies.
- ② Attach winch support angles to winch and install winch per location shown on shop drawing (see Fig. 1).

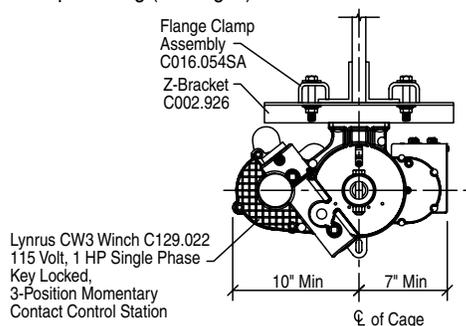


Figure 1

- ③ Install drive pipe support assembly angles per location shown on shop drawing.
- ④ Attach drive pipe support assemblies to angles with threaded rod. Adjust assemblies vertically to proper height (See Fig. 2).

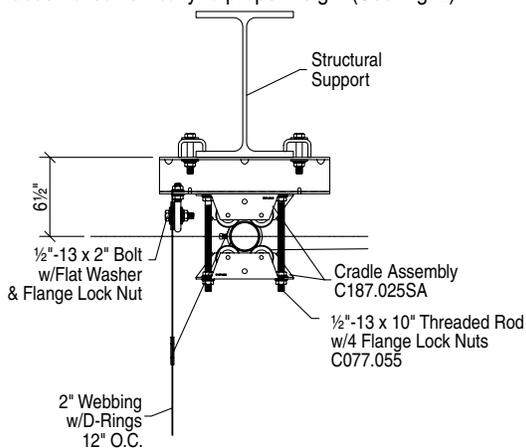


Figure 2

- ⑤ Using the project drawings, identify the 2 3/8 inch drive pipe sections that attach to the winch. Attach drive tube to winch output shafts using supplied couplers, key stock and set screws (see fig 3).

ATTENTION Always insert the key stock into the slot on the motor shaft, first then slide the coupler onto the motor shaft. **DO NOT INSERT KEY STOCK IN COUPLER FIRST.** Tighten coupler set screw securely making sure it hits the key stock.

DRAPER

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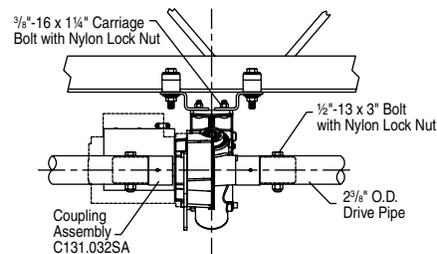


Figure 3

- ⑥ Raise the other drive pipe sections as indicated on project drawings. Once the drive pipe is resting in the drive pipe support assemblies, slide the proper number of cable guide sleeves onto the pipe.
- ⑦ Slide the cable guide sleeves into their approximate location, which should correspond to the lift lines of the practice cage.
- ⑧ Attach pipes together with drive pipe splices to obtain one long continuous run of drive (see Fig. 4).

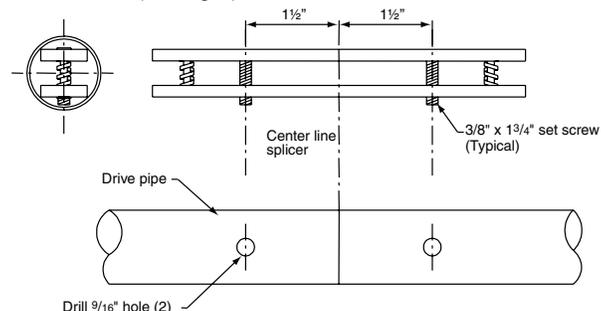


Figure 4

- ⑨ Operate the winch to determine that the drive pipe is rolling level. Make adjustments accordingly.
- ⑩ Install cable pulley support angles on non-winch side of cage. They should be located as shown on project specific drawings and assembled as shown in figure 5.

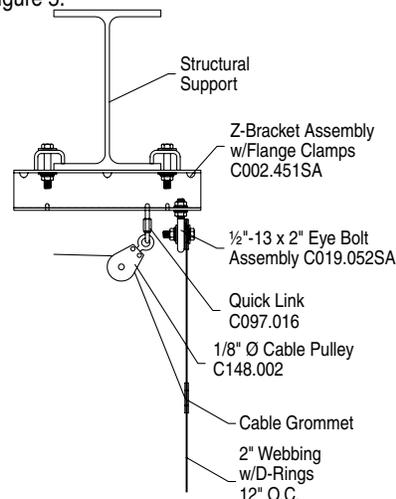


Figure 5

- ⑪ Attach the wire rope cable to the cable guide sleeves and wrap cable around the drive pipe at least three revolutions in the same direction. Cable guide sleeves should start at about 2 inches apart, but may be moved during final adjustment.
- ⑫ Route the loose end of the cable through pulley on the non winch side. Allow loose end of cables to drop to floor.
- ⑬ Assemble the practice cage frame on the floor, per the detail on page three and project specific drawings. Hint: Once the frame is assembled, use blocks to elevate the frame off of the floor.

Continued on page 2

Caution

Operating the cage too far in either direction could cause severe damage to the unit.

If you encounter any difficulties installing or servicing your Practice Cage, call your dealer or Draper, Inc., Spiceland, Ind., (765) 987-7999, or fax (765) 987-7142.

- ⑭ Attach the half clamp assembly with eye bolt to the frame at each belt location per drawings. The bottom (end with only one grommet) of the D-ring belt should be captured in the half-clamp by the eye bolt. Be sure that D-rings face away from the center of the practice cage (see Fig. 6).

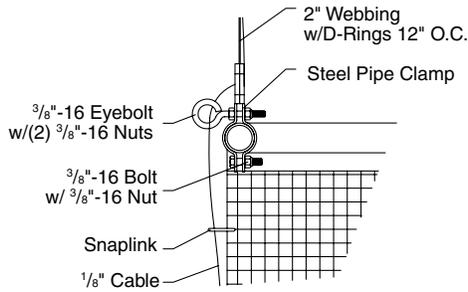


Figure 6

- ⑮ Route loose cable ends through the grommet located approximately 15" from the top of belt (grommet about 12" above last D-ring) and then through each D-ring on each belt. Use care not to twist the belt.
- ⑯ Temporarily attach a cable weight to each of the cable using two cable clamps and a thimble. At this point weight should just rest on the floor with the cable just barely taut. **DO NOT CUT THE CABLES.**
- ⑰ Once all of the weights are secured, lift the frame up to a level where it is within arm's reach.
- ⑱ Attach net to frame using 8" hook & loop attachment strips (25 yard roll provided). Net will be free hanging at this point.
- ⑲ Once attached, raise the practice cage and frame up to its highest point and attach the top of the webbing support straps using bolts through the grommet and eye-bolt (see Fig. 5, page 1).
- ⑳ Lower practice cage until the frame is fully supported by the webbing support straps and the cable weights are approximately 3" off the finished playing surface. This should result in approximately 12" of netting material lying on the floor which is necessary to keep balls in the cage during use. If the amount of netting that is lying on the floor is not 12", it will be necessary to adjust the webbing support strap lengths to achieve the desired result.
- ㉑ Remove each cable weight, one at a time, while keeping some tension on the cable. Slide the cable weight sleeve on to the cable and reattach weight so that it rests approximately 3" off the floor. Trim and tape cable ends as necessary, then slide sleeve over clamps and loose cable end. Weight sleeve insures that the clamps, cable end, etc do not get caught and damage the netting material (see Fig. 7).

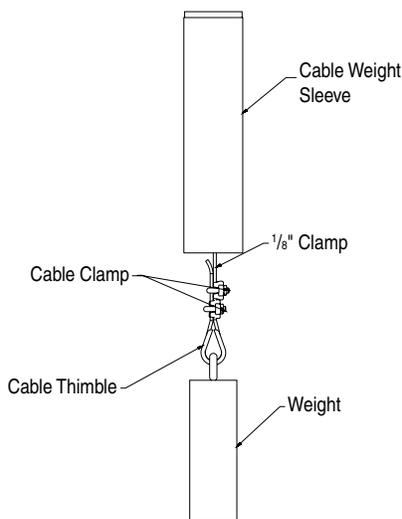


Figure 7

- ㉒ With cable weights 3" off the floor and the cables hanging straight, use Draper supplied snap links to attach netting to cables. Snap links should be placed approximately 24" on center and should capture at least two or three stands of the netting material. The first snap link should be placed about 2" above the cable weight.

Adjustments

- ① Operate practice cage up to the stored position and set upper limit. Operate practice cage to the down position (with cable weights 2" above playing surface and set lower limit. (See separate limit switch instructions.)
- ② Adjust spacing between cable guide sleeves to obtain a level lift of the curtain.
- ③ There are two basic vertical adjustments to this practice cage. One is the threaded rods attaching the drive pipe support assemblies to the drive pipe support angles. The other is multiple holes in the top of each D-ring belt.

Please Note:

- The same number of pre-wraps must be maintained for all hoist lines.
- To increase the amount of line take-up on a given cable guide assembly, you must decrease the dimension between the guides. To decrease the amount of take-up, increase the distance between cable guide flanges.
- Once pre-wraps are around the drive pipe, apply duct tape around cable. This will create a consistent groove for cable collection.

Limit Switch Adjustment

⚠ CAUTION: Setting the limit switches is a hazardous operation. To set the limit switches you must access the hoist while the cable is installed and observe operation to determine travel direction. Lock out and tag the electrical source prior to making any actual adjustment inside the limit switch box to prevent electric shock and/or injury due to unexpected winch movement.

- ① Remove the limit box cover by loosening limit box cover retaining screw. Cover will slide to one side and hinge open. Cover is on a cable tether to prevent it from falling and damaging the curtain or floor.
- ② Carefully observe the travel of the limit switch index wheels as the winch is operated. Two travel limit switches are provided. Which switch becomes the upper one and which becomes the lower on depends on the direction of rotation of the winch drum while the curtain is being raised. This is determined by the conditions of each installation. Carefully check which switch is for the upper travel and which is for lower travel before making any adjustments. Failure to do so could result in damage to the winch or curtain system as it may over-travel if wrong switch is adjusted.
- ③ Operate hoist in desired direction until desired position is reached or limit switch actuates. If necessary, move index wheel to allow more travel by following steps 4 to 8 below.
- ④ Shut off or disconnect power to winch to prevent chance of electric shock and/or injury due to unexpected winch movement.
- ⑤ Push the index box toward the electrical box (away from the threaded rod) to disengage index wheel.
- ⑥ Rotate index wheel toward or away from the micro switch as required.
- ⑦ Release index bar ensuring that it engages index wheel.
- ⑧ Turn on or reconnect power to winch and verify travel stops at desired location and repeat steps 4 to 7 as necessary for each direction of travel.
- ⑨ Verify setting in each direction and reattach limit switch box cover.

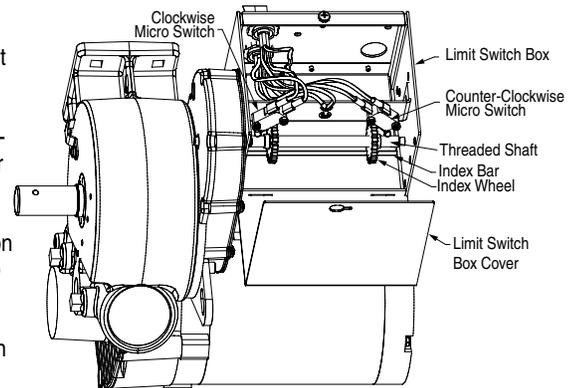
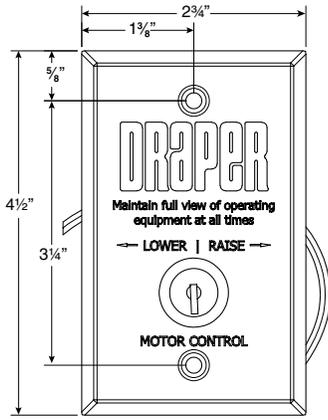
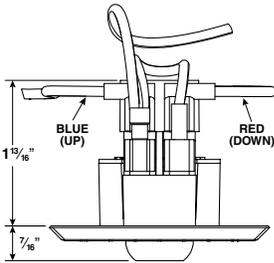


Figure 8

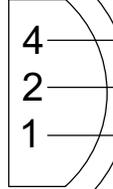


FRONT

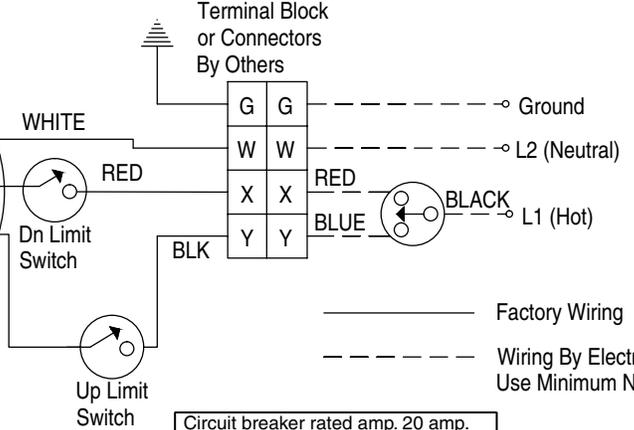


TOP

Motor
3/4 HP
110 - 120 V/1/60
Instant Reverse

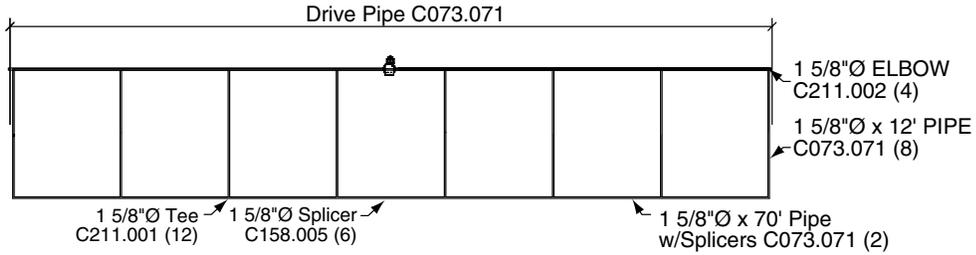


Wiring Diagram

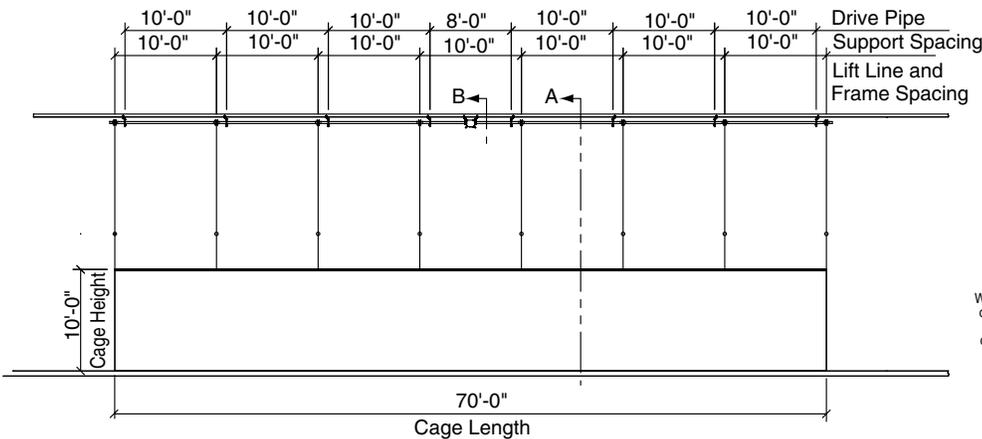


Circuit breaker rated amp. 20 amp.	
Fused circuit rated amp. 20 amp.	
Minimum Wire Size	
90' maximum run.	12 ga.
90' to 140' run.	10 ga.
Over 140'.	8 ga.
Sizes of wall masonry boxes required for single and ganged key switches-- All boxes 2" (w) x 3 3/4" (h) x 2 1/2" (d).	

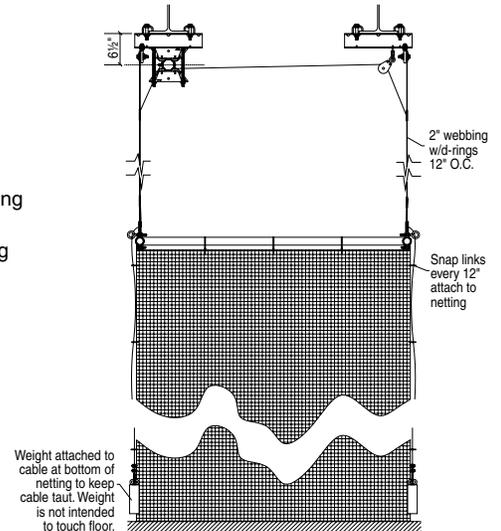
Bottom Lifting Practice Cage Dimensions and Details



Top View



Side View



End View